



# FACT SHEET

## Brookhaven Landfill, Town of Brookhaven, New York

JULY 2018

### INTRODUCTION

The New York State Department of Environmental Conservation (DEC) is publishing a regular series of fact sheets to share information with the community regarding actions taken by DEC and the Town of Brookhaven (Town) to improve air quality in the areas surrounding the Brookhaven Landfill. This fact sheet will provide an update of the activities that have occurred since the release of the previous fact sheets from August 2017 and April 2018 which are available at <http://www.dec.ny.gov/public/111038.html>.

### Facility Brief

The Town of Brookhaven Landfill (the landfill) is a DEC permitted facility located in the hamlet of Yaphank, Town of Brookhaven, Suffolk County. The landfill began operating in 1974 and initially accepted household waste, or municipal solid waste (MSW). This MSW was placed in cells (designated areas) 1-4. The disposal of MSW ceased in 1990 in compliance with the Long Island Landfill Law. Construction of cells 5 and 6 took place after 1990. Cell 5, which accepted construction and demolition (C&D) debris and ash from local resource recovery facilities, is currently being capped and prepared for closure. Cell 6, which lies adjacent to Woodside Ave between Station Road and Horseblock Road, is currently active and accepting C&D debris, ash, and other authorized material. The landfill has a gas collection system for methane and other gases and a permanent flare to burn the gases to reduce odors and other emissions. The landfill also has a leachate collection system for the liquid that passes or 'leaches' through the waste mass.

### SUMMARY OF COMPLETED AND ONGOING ACTIVITIES

- Cover and closure activities are ongoing in a 31-acre portion of the landfill, which is expected to be completed during calendar year 2018.
- The Town implemented their Corrective Action Plan (CAP) and both the Town and DEC continue to monitor potential onsite sources of uncontrolled landfill gas releases to identify and mitigate sources of odors.
- DEC resumed the community H<sub>2</sub>S monitoring in May 2018. The Town and DEC continue their evaluation of the effectiveness of the H<sub>2</sub>O<sub>2</sub> treatment system on reducing odors.
- The Town intends to finalize the dosing strength and design for the permanent H<sub>2</sub>O<sub>2</sub> treatment system in summer 2018.

## ODOR MANAGEMENT AND CORRECTIVE ACTION PLAN (CAP)

The final version of the Corrective Action Plan (prepared by RTP Environmental Associates, Inc.) has been approved for full implementation at the landfill. DEC will closely monitor the ongoing results and improvements achieved, and will make additional changes to the CAP with the Town as required.

Based on the CAP, the Town will continue to focus on two main areas of concern:

- Proceed with final capping and closure of the sections of the landfill which are filled to capacity, and
- Mitigate the leachate storage tank area.

The following is an update on completed activities and the status of the focus areas.

### Operating Landfill and Inactive Area Closure/Capping

#### Summary of Landfill Capping completed to date

Cells	Cap Phase	Area (acres)	Status	Year Completed/ Projected Completion Year
1 - 4	Phases 1-5b	95.6	Completed	1996
5 - 6	Phases A-F	77.8	Completed	2002 – 2017
5 - 6	Phase G	30.8	Under construction	2018
6	Remaining area to be capped	77.8	Active /partly filled with final three phases yet to be constructed	Upon achieving final elevation

#### Summary of Landfill Capping during this reporting period

At this time, Phase G of the capping plan is being implemented which includes grading the side slopes of cell 6 in preparation for the installation of the geosynthetic liner layer. The equipment used is an excavator and pay loader with multiple heavy-duty articulated dump trucks. This work involves contouring of deposited waste and ash to achieve the final grade and elevations. Excavation is avoided during unfavorable weather conditions (i.e. weather inversions) to minimize potential offsite odor episodes. The contouring and grading activity on the side slopes has been completed and will continue on the upper plateau until July. Upon completion of the grading activities, a soil cover will be placed followed by the other composite geosynthetic components of the landfill cap including a vegetated soil layer. The following link provides an illustration of a generic EPA mandated landfill cap design:

[https://www.epa.gov/sites/production/files/2015-04/documents/a\\_citizens\\_guide\\_to\\_capping.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/a_citizens_guide_to_capping.pdf) .

The 31-acre cover and closure project under Phase G is expected to be complete prior to the winter of 2018, with storm drain work and landscaping activities planned in spring of 2019.

When the Phase G closure project is complete, approximately 75 percent of the entire landfill will be capped. (Please refer to pictures below of landfill closure activities related to grading as seen from Woodside Ave.)

## Leachate Collection System Improvement

The Town completed the upgrades identified and detailed in the CAP by replacing key equipment to improve operational reliability. The following is the list of routine maintenance activities which took place during the month of June:

- Leachate tank cleaning,
- Line maintenance,
- Flare repair, and
- Sulfa treat catalyst replacement.

### Treatment of Landfill Leachate for Hydrogen Sulfide

As mentioned in the previous fact sheet, the leachate from the landfill is treated with hydrogen peroxide ( $H_2O_2$ ) to reduce the odor-causing sulfur compounds, thereby removing the primary source of odors in the proximity of the leachate storage tanks which are located near the intersection of Woodside Avenue and Horseblock Road. D&B, one of the Town's consultants, has completed the installment of the permanent  $H_2O_2$  system and is currently optimizing and finalizing the frequency and dosage concentration injected into the leachate tanks.

## Landfill Gas Collection and Flaring

The Town hired SCS Engineers to evaluate the existing landfill gas collection and flare system. They will make recommendations for improvements in addition to the regular maintenance of the landfill gas collection and flare system.

### CONTINUOUS MONITORING OF OFFSITE $H_2S$ BY THE DEC

DEC initiated a continuous hydrogen sulfide ( $H_2S$ ) monitoring program at two offsite locations to monitor and verify the effectiveness of the CAP implemented at the landfill. The continuous monitoring equipment was first installed in June 2017. The monitors were removed during the winter season, because they cannot operate at temperatures below 32°F. DEC reinstalled two Acrulog  $H_2S$  monitors on May 9, 2018. One monitor is located along East Woodside Avenue near the leachate tanks and the other is located south of the landfill at the Frank P. Long Intermediate School (FPL). The Acrulog measures  $H_2S$  in the range of 0 to 2000 parts per billion (ppb). The measurements are collected at ten-minute intervals. Because the instrument operates on a continuous basis, it is considered an effective screening tool for detecting hydrogen sulfide odor episodes.

$H_2S$  has not been detected this year at the FPL monitor. On June 12, during the night and early morning hours, the monitor installed along East Woodside Avenue picked up two exceedances of the New York State  $H_2S$  standard, which is 10 ppb for 1-hour average concentration. This was linked to cleaning of the leachate tanks and maintenance work performed during the previous day. DEC staff will continue to monitor the  $H_2S$  measurements from these instruments.

## FOR MORE INFORMATION

Please contact Aphrodite Montalvo, Public Participation Specialist  
Phone: (631) 444-0249  
Email: [R1info@dec.ny.gov](mailto:R1info@dec.ny.gov)

## TO REPORT AN ODOR COMPLAINT

### **DEC Odor Hotline: (631) 444-0380**

Please leave your name, phone number, date of call, location and description of odor.

For more information from NYSDEC, visit our website:

[dec.ny.gov](http://dec.ny.gov)

## Grading Activity for Capping and Closure of Phase G



Smooth grading of side slopes as seen from Woodside Ave



Close-up view of the side slopes being smooth graded



Smooth grading at the topside of the landfill with layer of additional soil



A section where smooth grading has been completed